

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Received at London Office 14 JUN 1944

Date of writing Report 5. 6. 1944 when handed in at Local Office 12. 6. 1944 Port of MANCHESTER. 29 August 1944
No. in Survey held at PATRICROFT, MANCHESTER. Date, First Survey 5. 10. 43. Last Survey 24. 5. 19 44.
Reg. Book. Number of Visits Three + 12

on the ^{Single} ~~Triple~~ Screw vessel 400 TON TANKER. "EMPIRE BARKIS" Tons ^{Gross} ~~Net~~
Built at ROWHEDGE. By whom built Rowhedge Ironworks. Yard No. L. 539 When built 1944.
Owners ADMIRALTY MINISTRY OF WAR TRANSPORT Port belonging to LONDON
Oil Engines made at PATRICROFT. By whom made L. Gardner & Sons. Engine No. 61500 When made 1944.
Generators made at MANCHESTER. By whom made Lancs. Dynamo & Crypto Ld. Generator No. 198410 When made 1944.
No. of Sets 1. Engine Brake Horse Power 9.5 Nom. Horse Power as per Rule 8.7 Total Capacity of Generators 5 Kilowatts.

OIL ENGINES, &c.—Type of Engines Heavy Oil. 2 or 4 stroke cycle 4 Single or double acting Single.
Maximum pressure in cylinders 850 lbs/sq. in. Diameter of cylinders 4.25" Length of stroke 6" No. of cylinders One No. of cranks One.
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5.5" Is there a bearing either side of crank Yes.
Revolutions per minute 1000 Flywheel dia. 26" Weight 511 lbs. Means of ignition Compression Kind of fuel used heavy oil.
Crank Shaft, dia. of journals as per Rule Approved and as fitted 2.625" Crank pin dia. 2.625" Crank Webs Mid. length breadth 4" Thickness parallel to axis -
Flywheel Shaft, diameter as per Rule Flywheel mounted on Intermediate Shafts, diameter as per Rule Thickness of cylinder liners .096"
as fitted crankshaft coupling.

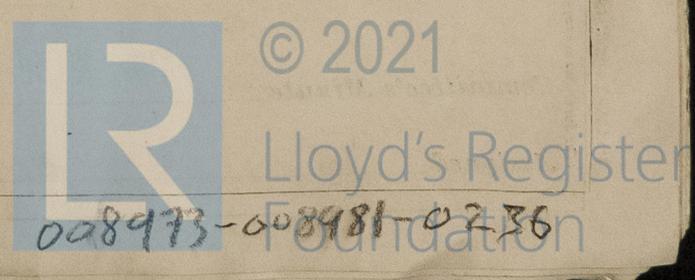
Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes. Means of lubrication Forced.
Engine started by hand
Are the cylinders fitted with safety valves No. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material
Cooling Water Pumps, No. One Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Lubricating Oil Pumps, No. and size One .8125" dia. x .5" stroke.
Air Compressors, No. One. No. of stages 2 Diameters 4.5" & 1.875" Stroke 2.75" Driven by Engine through clutch.
Scavenging Air Pumps, No. - Diameter - Stroke - Driven by -

AIR RECEIVERS:—Have they been made under Survey - State No. of Report or Certificate -
Is each receiver, which can be isolated, fitted with a safety valve as per Rule
Can the internal surfaces of the receivers be examined - What means are provided for cleaning their inner surfaces -
Is there a drain arrangement fitted at the lowest part of each receiver
High Pressure Air Receivers, No. - Cubic capacity of each - Internal diameter - thickness -
Seamless, lap welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure by Rules -
Starting Air Receivers, No. - Total cubic capacity - Internal diameter - thickness -
Seamless, lap welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure by Rules -

ELECTRIC GENERATORS:—Type Compound Wound, drip proof.
Pressure of supply 110 volts. Full Load Current 45.5 Amperes. Direct or Alternating Current direct.
If alternating current system, state the periodicity - Has the Automatic Governor been tested and found as per rule when full load is suddenly thrown on and off Yes.
Generators, are they compounded as per rule Yes is an adjustable regulating resistance fitted in series with each shunt field Yes
Are all terminals accessible, clearly marked, and furnished with sockets Yes
Are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes
If the generators are under 100 kw. full load rating, have the Makers supplied certificates of test Yes and do the results comply with the requirements Yes
If the generators are 100 kw. or over have they been built and tested under survey -

PLANS. Are approved plans forwarded herewith for Shafting 15.10.43. Receivers - Separate Tanks -
SPARE GEAR AS PER RULE REQUIREMENTS.

The foregoing is a correct description,
for and on behalf of L Gardner & Sons Ltd. Manufacturer.
R S Jones



Dates of Survey while building: 5.10.43, 3.3.44, 24.5.44.
 During progress of work in shops - -
 During erection on board vessel - - -
 Total No. of visits 15

Dates of Examination of principal parts—Cylinders 3.3.44. Covers 3.3.44. Pistons 3.3.44. Piston rods -
 Connecting rods 3.3.44. Crank and Flywheel shafts 18.2.44. Intermediate shafts -
 Crank and Flywheel shafts, Material O.H. Steel. Identification Marks LLOYD'S 2.2285. WJF. 18.2.44.
 Intermediate shafts, Material - Identification Marks -
 Identification marks on Air Receivers -

Is this machinery duplicate of a previous case Yes. If so, state name of vessel Rowhedge No. M.629. Please see Manchester Report No. 11,667.

General Remarks (State quality of workmanship, opinions as to class, &c. THIS ENGINE HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY, OF TESTED MATERIALS, IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND REQUIREMENTS OF THE RULES.

MATERIALS AND WORKMANSHIP ARE GOOD AND THE ENGINE WAS FOUND TO BE SATISFACTORY WHEN TESTED IN SHOP UNDER FULL LOAD CONDITIONS. THE ENGINE IS SUITABLE, IN OUR OPINION, FOR FITTING ON BOARD A VESSEL BUILDING TO THE CLASS OF THIS SOCIETY.

IN ADDITION TO THE 5.K.W. ELECTRIC GENERATOR AND SMALL AIR COMPRESSOR, THIS ENGINE IS INTENDED TO DRIVE A DAWSON & DOWNIE PUMP WHICH HAS NOT BEEN TESTED AT THE ENGINE BUILDERS.

This engine has been efficiently installed on board the vessel under Special Survey & in accordance with the approved plans + Rule requirements, tested under full load conditions + found satisfactory.

The exhaust pipes are lagged with non-conducting material.

The sea suction is provided with an efficient strainer which can be cleared within the vessel.

J.S. Turpie

W.J. Ferguson & E. Knowles
 Surveyors to Lloyd's Register of Shipping.

The amount of Fee ... £ 4 : 4 0
 Travelling Expenses (if any) £ 0 : 10 0
 When applied for, 12.6.19.44.
 When received, 19.

FRI. 6 OCT 1944

Committee's Minute

Assigned

see minute on J.S. Rpt.



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